

ABSTRACT

A capacitive discharge ignition system for initiating combustion during cold- and hot-ignition of an internal combustion engine requiring minimal mechanical energy input. The capacitive discharge ignition system includes a magneto having a rotor, a first capacitive discharge device electrically connected to the magneto and to an ignition coil of an internal combustion engine and a second capacitive discharge device electrically connected to the first capacitive discharge device, and to the ignition coil. A mechanical startup mechanism, such as a pull-type or kick-type device, is connected to the magneto and adapted to initiate rotation of the rotor, and thereby combustion within the engine. An energy storage device is electrically connected to the second capacitive discharge device and to the magneto. The energy storage device is adapted to store energy generated by the magneto during rotation of the rotor and to provide energy to the ignition coil of the internal combustion engine.